Panasonic

Super Dynamic Full HD Network Camera
WV-SPN631
Super Dynamic HD Network Camera
WV-SPN611

Full HD / 1,920 x 1,080 60 fps H.264 Network Camera featuring *Super Dynamic* (WV-SPN631)
HD / 1,280 x 720 60 fps H.264 Network Camera featuring *Super Dynamic* (WV-SPN611)

Key Features

- **1080p** Full HD / **720p** HD images up to **60 fps**[*1]
- Approximate 1/3 inches, high sensitivity MOS Sensor
- Super high resolution at Full HD/1,920 x 1,080 created by high sensitivity MOS Sensor. (WV-SPN631 only)
- **Multiple H.264 (High profile) streams (max. 4 streams)** and JPEG streams ensure simultaneous real time monitoring and high resolution recording by new enhanced "UniPhier®", Panasonic's proprietary System LSI platform.
- Maximum Screen Size is 2,048 x 1,536* @30fps, H.264 (WV-SPN631 only)
  * Used by super resolution techniques
- ***Enhanced Super Dynamic***[*1] and ABS (Adaptive Black Stretch) technologies deliver **133 dB** wider dynamic range compared to conventional cameras.
- **Multi process NR & 3D-DNR** ensures noise reduction in various conditions.
- High sensitivity with Day & Night (IR) function:
  WV-SPN631: 0.04 lx (Color), 0.01 lx (B/W) at F1.4
  WV-SPN611: 0.01 lx (Color), 0.003 lx (B/W) at F1.4
- **IR LED** equipped: The equipped infrared LED makes it possible to take pictures at zero lx.(Extension Unit)
- **IR LED** is controlled to match the environment, thereby the camera provides clear images of human faces without white blur. (Extension Unit)
- **High Speed ABF (Auto Back Focus)** ensures easy installation.
- **VIQS** (Variable Image Quality on Specified area) technology allows the designated **eight areas** to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate.
- Cropping function enables to provide whole image and the part image simultaneously. Up to 4 image capture areas can be specified, and it is also possible to control the sequence.
- ***Face Super Dynamic*** technology ensures clear face image.
- Electronic sensitivity enhancement: Auto (Up to 16/30s) / OFF
- Selectable light control modes:
  Outdoor scene,Indoor scene (50 Hz) / Indoor scene (60 Hz),Fix shutter
  Indoor scene (50 Hz/60Hz): Flicker caused by fluorescent lightning will be automatically compensated.
- 2x, 4x digital zoom controlled by browser
- VMD (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 8 private areas, such as house windows and entrances/exits.
- Camera title display: Up to 20 alphanumeric characters on the browser
- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SDXC/SDHC/SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic alarm protocol output.
- Full duplex bi-directional audio allows interactive communication between camera site and monitoring site.
- JPEG Image compression ratio can be changed by alarm so that higher quality image can be provided.
- Prioritized stream control: One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- **Double SDXC/SDHC/SD Memory card slots** for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (H.264 / JPEG). Realize long-term recording and auto backup function.
- Face detection function detects the position of human face and the information is sent by XML or video stream.(Extension Software)
- Can be added new intelligent extension software in addition to built-in VMD (Video Motion Detection), alarm function.
- **Fog compensation function** equipped as standard.
- **Super Chroma Compensation** function realizes a better color reproducibility even in low illumination.
- H.264 max. bit rate/client and Total bit rate control allows flexible network traffic management. Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.
- Internet mode: H.264 images can be transmitted over HTTP protocol.
- Multi-language: English / Italian / French / German / Spanish / Portuguese / Russian / Chinese / Japanese
- IPv4/IPv6 protocol supported
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- Supports **Extension Units** : Hardware functions can be added by mounting an Extension Unit (IR LED unit, RS-485 Output unit) to the front or rear sides of the camera.
- HLC (High Light Compensation):
  If a bright light source such as car headlights points in the direction of a camera, the camera corrects for strong lights and their surroundings to provide clear images of the areas.
- Onvif compliant model

*1 Super Dynamic function is automatically set off on 60 fps mode

Optional Accessories

IR LED unit **WV-SPN6FRL1**	RS-485 Output unit **WV-SPN6R481**

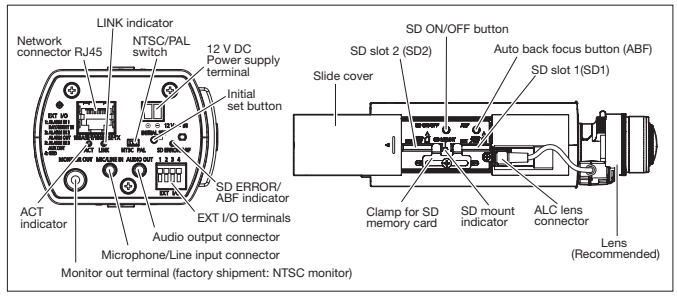
Specifications

Camera	Image Sensor		Approx. 1/3 type MOS image sensor
	Effective Pixels		WV-SPN631 : Approx. 2.4 mega pixels, WV-SPN611 : Approx. 1.3 mega pixels
	Scanning Mode		Progressive scan
	Scanning Area		WV-SPN631 : 5.28 mm (H) x 3.30 mm (V) {7/32 inches(H) x 1/8 inches(V) } WV-SPN611 : 4.86 mm (H) x 3.65 mm (V) {3/16 inches(H) x 5/32 inches(V) }
	Minimum Illumination		WV-SPN631 : Color: 0.04 lx, BW: 0.01 lx (F1.4, Maximum shutter : Max. 1/30s, Gain : On(High)) Color: 0.003 lx, BW 0.0007 lx (F1.4, Maximum shutter : Max. 16/30s, Gain : On(High)) *1 WV-SPN611 : Color: 0.01 lx, BW: 0.003 lx (F1.4, Maximum shutter : Max. : Off (1/30s), Gain : On(High)) Color: 0.0007 lx, BW 0.0002 lx (F1.4, Maximum shutter : Max. : Max. 16/30s, Gain:On(High)) *1
	White Balance		AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)
	Light Control Mode		Outdoor scene : Automatic integration of ALC and ELC / Indoor scene [50 Hz] : Automatic integration of ALC and ELC with flickerless / Indoor scene [60 Hz] : Automatic integration of ALC and ELC with flickerless / ELC/Fix shutter
	Shutter Speed		[2 mega pixel [16:9](60 fps mode)/ 1.3 mega pixel [16:9](60 fps mode)] OFF(1/60), 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000,1/10000 Other than [2 mega pixel [16:9](60 fps mode)/ 1.3 mega pixel [16:9](60 fps mode)] OFF(1/30), 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250,1/500, 1/1000, 1/2000, 1/4000, 1/10000
	Super Dynamic*2		On(High) / On(Normal) / Off
	Face Super Dynamic		On/Off (only when Super Dynamic : On)
	Adaptive Black Stretch		On/Off (only when Super Dynamic Off)
	Fog compensation		On/Off (only when Super Dynamic / Adaptive black stretch: Off)
	High light compensation (HLC)		On/ Off (only when Super Dynamic/ Back light compensation: Off)
	AGC		On (Low)/ On (Mid)/ On (High)/ Off
	Maximum shutter		max. 1/1000 s, max. 1/500 s, max. 1/250 s, max. 1/120 s, max. 2/120 s, max. 1/100 s, max. 2/100 s, max. 1/60 s, max. 1/30 s, max. 2/30 s, max. 4/30 s, max. 6/30 s, max. 10/30 s, max. 16/30 s
	Day & Night (IR)		Off/ On/ Auto1 (Normal)/ Auto2 (IR Light)/ Auto3 (SCC)
	Dynamic Range		133 dB typ. (Super Dynamic: On)
	Digital Noise Reduction		High / Low
	Video Motion Detection		On/ Off, 4 areas, Sensitivity : 15 steps, Detection size : 10 steps
	Privacy Zone		On/ Off (up to 8 zones available)
	VIQS		On/ Off (up to 8 zones available)
	Camera Title (OSD)		On/ Off, Up to 20 characters (alphanumeric characters, marks)
	Focus Adjustment		Auto back focus / Focus / Adjusting method
Browser GUI	Cropping		Off / JPEG(1) / JPEG(2) / JPEG(3) / H.264(1) / H.264(2) / H.264(3) / H.264(4) / H.264(all) Up to 4 image capture areas can be specified
	Camera Control		Brightness, AUX On/Off
	Display Mode		Spot, Quad : Image from 16 cameras can be displayed in 4 different Quad screens or 16 split screen (JPEG only). 20 characters camera title available.
	Digital Zoom		1x, 2x, 4x controlled by browser GUI
	Clock Display		Time : 12H/24H, Date : 5 formats on the browser, Summer time (Manual)
	Alarm Control		Reset
	One Shot Capture		A still picture will be displayed on a newly opened window.
	Audio		Mic (Line) Input : On/Off Volume adjustment : Low / Middle / High, Audio Output : On/Off Volume adjustment : Low / Middle / High
	SD Memory Data Download		Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloaded.
	GUI / Setup Menu Language		English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
	System Log		Up to 100 (Internal) Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs
	Supported OS *3		Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®
	Supported Browser		Windows® Internet Explorer® 11 (32-bit) Windows® Internet Explorer® 10 (32-bit) Windows® Internet Explorer® 9 (32-bit) Windows® Internet Explorer® 8 (32-bit) Windows® Internet Explorer® 7 (32-bit)
Network	Network IF		10Base-T / 100Base-TX, RJ45 connector
	Image Resolution	Image Capture Mode: 2 mega pixel [16:9] (30/60 fps)	WV-SPN631 : 1,920 x 1,080 / 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90
		Image Capture Mode: 2 mega pixel [4:3] (30fps)	WV-SPN631 : 1,600 x 1,200 / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120
		Image Capture Mode: 3 mega pixel [4:3] (30fps)	WV-SPN631 : 2,048 x 1,536* / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120 *Used by super resolution techniques
		Image Capture Mode: 1.3 mega pixel [16:9] (30/60fps)	WV-SPN611 : 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90
		Image Capture Mode: 1.3 mega pixel [4:3] (30fps)	WV-SPN611 : 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120
	H.264 *4	Transmission Mode	Constant bitrate / VBR / Framerate priority / Best effort / Advanced VBR
		Frame Rate	1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 / 60 fps
		Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 6,144 / 8,192 / 10,240 / 12,288 / 14,336 / 16,384 / 20,480 / 24,576 / 30,720 / 40,960 kbps
		Image Quality	Constant bit rate, Best effort: Low(Motion priority) / Normal / Fine(Image quality priority) VBR: 0 Super fine / 1 Fine / 2 / 3 / 4 / 5 Normal / 6 / 7 / 8 / 9 Low
		Refresh interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5s
		Transmission Type	Unicast / Multicast
	JPEG	Image Quality	10 steps
		Refresh interval	0.1 fps - 30 fps (JPEG frame rate will be restricted when displaying both JPEG and H.264 images.)
		Transmission Type	Pull / Push
	Audio Compression		G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps / AAC-LC*5
	Audio Mode		Off / Mic input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)
	Authentication for Audio		Level 1 only / Level 2 or higher / All users
	Bandwidth control		64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited
	Supported Protocol		IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, RTP, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP,FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP

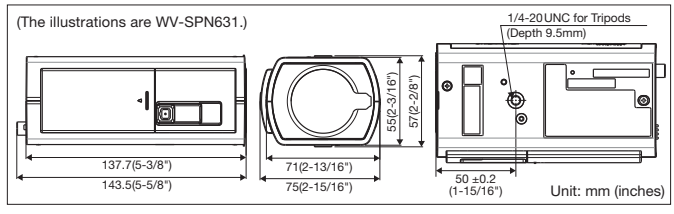
Network	FTP Client	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDXC/SDHC/SD memory card is available.)
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
	SDXC/SDHC/SD Memory Card (Option) * Manufactured by Panasonic (SD speed class 4 or higher) * Use the SD memory card that complies with UHS-1 (Ultra High Speed-1) in the case of SD Speed Class 10.	H.264 recording : Manual REC / Alarm REC (Pre/Post) / Schedule REC/ Backup upon network failure Compatible JPEG recording : Manual REC / Alarm REC (Pre/Post) / Backup upon network failure Compatible SD (SDHC/SDXC) card: Panasonic 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64GB** model *SDHC card, ** SDXC card (except miniSD card and microSD card)
	Employment of two SD cards	Dual Recording for Redundancy, Series Recording for long time
	Cellular Phone Compatibility	JPEG image, AUX control (by access level)
	Mobile Terminal Compatibility*6	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ Terminal
Alarm	Alarm Source	3 terminals input, VMD, Command alarm, Audio detection alarm
	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, FTP image transfer, Panasonic protocol output
	Alarm Log	With SDXC/SDHC/SD memory card : Up to 50,000 logs for each SD memory card
Schedule	Schedule mode	Alarm permission / VMD permission / Access permission / H.264 recording / Audio detection permission / Scene file / FTP periodic image transmission
Input / Output	Monitor Output (for adjustment)	VBS: 1.0 V [p-p]/75 Ω, composite, RCA jack An NTSC or PAL signal can be outputted from camera.
	Microphone Input	ø3.5 mm monaural mini jack Input impedance: Approx. 2 kΩ (unbalanced) Recommended applicable microphone: Plug-in power type Supply voltage: 2.5 V ±0.5 V Recommended sensitivity of microphone: -48 dB±3 dB (0 dB=1 V/Pa, 1 kHz)
	Line Input	Input level: Approx. –10 dBV
	Audio Output	ø3.5 mm stereo mini jack (monaural output) Output impedance: Approx. 600 Ω (unbalanced)
	External I/O Terminals	ALARM IN 1 (DAY/NIGHT IN), ALARM IN 2 (ALARM OUT), ALARM IN 3 (AUX OUT)
General	Safety	UL (UL60950-1), C-UL (CAN/CSA C22.2 No.60950-1), CE, IEC60950-1
	EMS	FCC (Part15 ClassA), ICES-003 ClassA, EN 55032 ClassB, EN55024
	Power Source and Power Consumption (excluding Extension Units)	WV-SPN631: DC 12 V : 430 mA/Approx. 5.1 W PoE DC 48 V : 130 mA/Approx. 6 W (Class 0 device) WV-SPN611: DC 12 V : 390 mA/Approx. 4.6 W PoE DC 48 V : 120 mA/Approx. 5.6 W (Class 0 device)
	(including Extension Units)	WV-SPN631: DC 12 V : 850 mA/Approx. 10.2 W PoE DC 48 V : 250 mA/Approx. 11.7 W (Class 0 device) WV-SPN611: DC 12 V : 800 mA/Approx. 9.6 W PoE DC 48 V : 240 mA/Approx. 11.1 W (Class 0 device) * ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY.
	Ambient Operating Temperature	-10°C ~ +50°C (14 °F ~ 122 °F)
	Ambient Operating Humidity	20 ~ 90 % (no condensation)
	Dimensions	75.0 mm (W) x 57.0 mm (H) x 143.5 mm (D) {2-15/16 inches (W) x 2-1/4 inches (H) x 5-21/32 inches (D)} (excluding lens/ power cord plug)
	Mass (approx.)	Approx. 400 g {0.88 lbs} excluding lens
	Finish	Main body: PC/ABS resin(Sail white)

*1 Converted value
*2 Super Dynamic function is automatically set off on 60 fps mode.
*3 For further information about PC system requirements and precautions for when using Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, or Windows® Internet Explorer®, click "Manual" - "Open" from the supplied CD-ROM and refer to "Notes on Windows® / Internet Explorer® versions".
*4 Transmission for 4 streams can be individually set.
*5 AAC-LC (Advanced Audio Coding - Low Complexity) is only used when recording audio on an SD memory card.
*6 For further information about compatible devices, refer to our website (http://security.panasonic.com/pss/security/support/info.html).

Part Names and Functions



Appearance



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Important
– Safety Precaution: Carefully read the Important Information, Installation Guide and operating instructions before using this product.
– Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.
• Masses and dimensions are approximate. • Specifications are subject to change without notice.

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Extension Unit

IR LED unit

WV-SPN6FRL1

Features

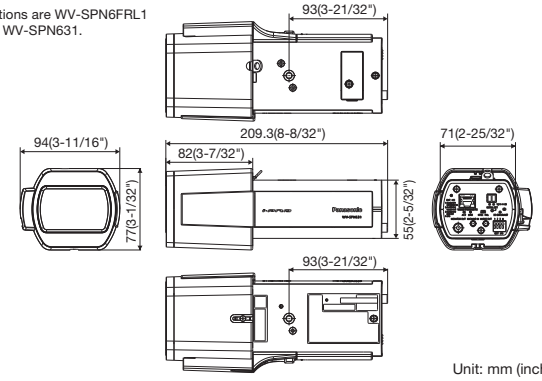
IR LED unit : WV-SPN6FRL1 can be attached to WV-SPN6 Series netowrk camera. It allows the camera to shoot the video by emitting an infrared ray even in a dark place.

Specifications

IR LED irradiation distance	Approx. 30 m {98.43 feet} ("When the recommenced lens attached to the WV-SPN631 is used in the wide field of view)
Applicable Lens	Refer to the Panasonic support website (http://security.panasonic.com/pss/security/support/info.html)
Ambient Operating Temperature	-10°C ~ +50°C (14 °F ~ 122 °F)
Ambient Operating Humidity	10 ~ 90 % (no condensation)
Power Source	Supplied from the camera
Dimensions	94 mm (W) x 77 mm (H) x 82 mm (D) {3-11/16 inches (W) x 3-1/32 inches (H) x 3-7/32 inches (D)}
Mass (approx.)	Approx. 140g {0.31 lbs}
Finish	Unit (resin part): PC/ABS resin, sail white
Supported camera	WV-SPN631, WV-SPN611

Appearance

This illustrations are WV-SPN6FRL1 attached to WV-SPN631.



Unit: mm (inches)

RS485 Output unit

WV-SPN6R481

Features

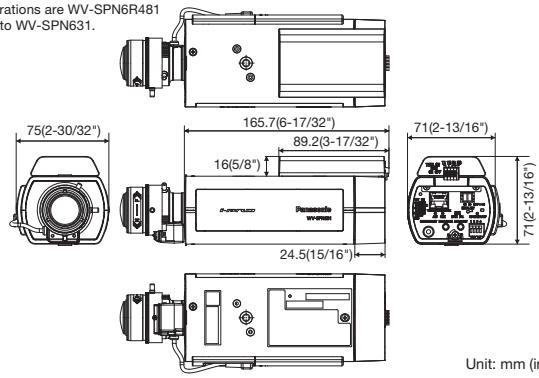
WV-SPN6R481 RS-485 Output unit enables the cameras easily to install on the 3rd party's pan/tilt positioner, converting control signal from IP to RS-485.

Specifications

Serial Port	RS485 compliant (For external device control)
Camera Control Protocol	Pelco-D/Pelco-P/Custom
Termination Switch	ON/OFF
Ambient Operating Temperature	-10°C ~ +50°C (14 °F ~ 122 °F)
Ambient Operating Humidity	20 ~ 90 % (no condensation)
Power Source	Supplied from the camera
Dimensions	71 mm (W) x 71 mm (H) x 89.2 mm (D) {2-13/16"(W) x 2-13/16"(H) x 3-17/32 inches (D)}
Mass (approx.)	Approx. 60g {0.13 lbs}
Finish	Resin part: PC/ABS resin, sail white / Metal part: Electro galvanized steel sheet / sail white coating
Supported camera	WV-SPN631, WV-SPN611

Appearance

This illustrations are WV-SPN6R481 attached to WV-SPN631.



Unit: mm (inches)

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